

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1, 3 and 5.

The informalities referred to in Official Action paragraph 3 have been corrected by the above amendment.

The above amendment is responsive to points set forth in the Official Action.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is entitled "**Version with Markings to Show Changes Made**".

Claims 1-2 have rejected as unpatentable over either Barton et al. (US 3,351,677 - Reference A) or MacDonald et al. (US 2,645,336 - Reference B) in view of either Musch et al. (US 4,737,528 - Reference C) Bateman et al. (US 4,235,980 - Reference D).

Claim 1 has been amended to recite the features of original claim 2.

The present invention provides an excellent adhesive composition for bonding speaker elements, especially to a polypropylene speaker frame.

Barton discloses a basic chlorinated polyethylene elastomer composition and it teaches nothing about its adhesive properties, much less about suitability for adhering speaker components to a polypropylene speaker frame.

Moreover, Barton fails to disclose or suggest the presently recited combination of components or proportions.

MacDonald discloses a polymer composition comprising halogen-2-butadiene and halogenated polyethylene, however, it teaches nothing about its adhesive properties.

Nor does it teach the presently recited combination of components or proportions.

Musch discloses a polychloroprene rubber having a favorable processing (vulcanizing) behavior. However, no mention is made of the presently recited combination of components or proportions or suitability as a speaker adhesive.

Bateman discloses an elastomeric terionomer blends including α,β -unsaturated carboxylic acid having good mechanical and good oil and ozone resistance.

Bateman is only interested in developing physical and chemical properties of the elastomer and teaches nothing about the adhesive properties of the blends.

No mention is made of the presently recited combination of components, proportions or properties.

As discussed above, the cited references are only interested in producing materials or developing mechanical and chemical properties of the polymers and do not contain any disclosure or suggestion about their application in an adhesive composition, much less about a precise adhesive composition for a specific application which fulfills a long sought need for adhering speaker components to a polypropylene speaker frame.

Claims 3-4 have been rejected as being unpatentable over Nonaka in view of either above References A-D and Wolfe (US 4,758,628 - Reference F).

This rejection is also respectfully traversed.

Claim 3 was amended to include limitations of original claim 4.

The present invention, as discussed above, provides a process for bonding speaker elements to a polypropylene speaker frame by the use of the specific adhesive composition of claim 1.

Nonaka discloses that polyolefin polymers such as polypropylene do not provide good adhesion. To eliminate such problem, Nonaka discloses an adhesion primer comprising an air curing unsaturated polyester resin.

An adhesive using a primer is well-known in the art and is a very troublesome and cost increasing factor for mass production such as speaker production, where millions of speakers are produced per month.

The present invention, in contrast, adheres components without using a primer in speaker production and has succeeded by using the specified adhesive composition as claimed.

Claim 5, which is in "consisting essentially of" format, expressly includes such primers.

Wolfe (U.S. 4,758,628) discloses thermoplastic elastomeric blends comprising polyethylene and polychloroprene gel. Although, Wolfe discloses mechanical properties and

polymerizing and blending processes of the material, he teaches nothing about adhesive properties of the blends, combination of components or proportions as presently claimed.

As discussed above, Nonaka discloses nothing about adhesion without a primer. Thus, the combination of Nonaka and other references provide no suggestion or teaching regarding the present claims.

Regarding Nonaka, it relates to the same field as the present invention. However, Nonaka did not appreciate at the time of his invention, which is far later than the other references, that the selection of materials in the other references, to adhere speaker components to a polypropylene frame, is very important. Thus, even though materials themselves are well-known in one field, their application may well be unobvious in another field, as is here the case.


For the foregoing reasons, it is apparent that the rejections on prior art are untenable and should be withdrawn.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned at the telephone or facsimile number below.

Respectfully submitted,

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Version with Markings to Show Changes Made

IN THE SPECIFICATION:

The paragraph beginning at line 25 on page 2 of the specification has been rewritten as follows:

The above adhesive composition shows improvement [on] in adhesion and durability against heat [comparing] compared with conventional adhesives in bonding various components to polypropylene, which is resulted from the synergistic effect of carboxylated synthetic chloroprene rubber selected from the varieties of synthetic chloroprene rubber and a kind of chlorinated polypropylene, i.e., chlorinated polypropylene and/or the derivative thereof, which are(is) used for the additive(s) of the adhesive composition.

Page 11 of the specification has been deleted in its entirety.

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Amended) A synthetic chloroprene rubber adhesive composition for adhering speaker components to a polypropylene speaker frame which component contains carboxylated synthetic chloroprene rubber as the main ingredient thereof, and further contains chlorinated polypropylene and/or chlorinated polypropylene derivatives,
wherein said chlorinated polypropylene derivative is acrylic-monomer-and-methacrylic-monomer-grafted chlorinated polypropylene, and, the volume of said chlorinated polypropylene and/or said chlorinated polypropylene derivatives contained in said adhesive composition is 1 - 30 parts by weight for 100 parts by weight of said synthetic chloroprene rubber.

Claim 2 has been canceled without prejudice to the subject matter thereof.

Claim 3 has been amended as follows:

3. (Amended) A process for producing a speaker having a speaker frame formed by molding polypropylene, wherein various speaker components are bonded to said speaker frame by using a synthetic chloroprene rubber adhesive composition which contains carboxylated synthetic chloroprene rubber [for] as the main ingredient thereof, and further contains chlorinated polypropylene and/or a chlorinated polypropylene derivatives,

wherein said chlorinated polypropylene derivative is acrylic-monomer-and-methacrylic-monomer-grafted chlorinated polypropylene, and, the volume of said chlorinated polypropylene and/or said chlorinated polypropylene derivatives contained in said adhesive composition is 1 - 30 parts by weight for 100 parts by weight of said synthetic chloroprene rubber.

Claim 4 has been canceled without prejudice to the subject matter thereof.